Sum of Root to Leaf Binary Numbers (View)

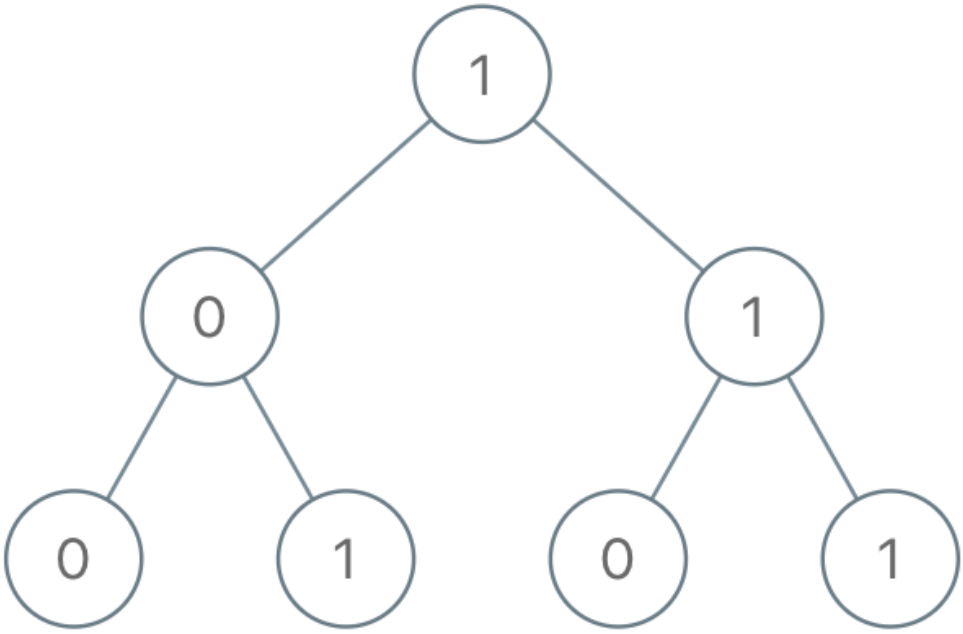
You are given the `root` of a binary tree where each node has a value `0` or `1`. Each root-to-leaf path represents a binary number starting with the most significant bit.

- For example, if the path is `0 -> 1 -> 1 -> 0 -> 1`, then this could represent `01101` in binary, which is `13`.

For all leaves in the tree, consider the numbers represented by the path from the root to that leaf. Return *the sum of these numbers*.

The test cases are generated so that the answer fits in a **32-bits** integer.

Example 1:




```
Input: root = [1,0,1,0,1,0,1]

Output: 22

Explanation: (100) + (101) + (110) + (111) = 4 + 5 + 6 + 7 = 22
```

Example 2:

```
Input: root = [0]

Output: 0
```

Constraints:

- The number of nodes in the tree is in the range `[1, 1000]`.
- `Node.val` is `0` or `1`.